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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,734	01/30/2004	Won-Kyu Paik	2557-000217/US	9897
30593	7590	12/18/2007	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			LUGO, DAVID B	
P.O. BOX 8910			ART UNIT	PAPER NUMBER
RESTON, VA 20195			2611	
			MAIL DATE	DELIVERY MODE
			12/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/767,734	PAIK ET AL.	
	Examiner	Art Unit	
	David B. Lugo	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-23 is/are allowed.
- 6) ☒ Claim(s) 24,28,30,32 and 34 is/are rejected.
- 7) ☒ Claim(s) 25-27,29,31 and 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. The objection of claims 1-15, 19, 20, 22, 25, 26, 28, 29 and 31, along with the rejection of claim 34 under 35 U.S.C. 112, 2nd paragraph have been withdrawn as Applicant has addressed the issues raised in the previous Office action.

2. Applicant's arguments filed 10/9/07 have been fully considered but they are not persuasive. Regarding the rejection of claims 24 and 30, Applicant argues that there is no motivation to combine the references of Gu and Kim, and that the combination of references fails to teach all the limitations of the claims. The Examiner respectfully disagrees.

Applicant argues that there is no motivation or suggestion to combine the references, and specifically argues that the Examiner has not indicated where the switching unit 400 of Kim would be inserted in the VSB sync signal detecting unit 720 of Gu, how it would be implemented, or what effect the switching unit might have on the VSB sync signal detecting unit. In response, the Examiner notes that that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). However, in this instance, Kim does provide a suggestion as to where the switching unit would be provided relative to the sync signal detecting unit of Gu. Kim discloses a switching unit which selects one of two signals to be provided to a sync signal separator/control signal generator 500. Thus, Kim provides the teaching of selecting one of two

signals, where the selected signal is used in determining sync signals. Kim discloses that providing for the selection of signals before and after an equalizer allows for reduced initial operational time of the system and thus enhanced performance (para. 11). Therefore, one of ordinary skill in the art would recognize that the switching unit would be positioned prior to the sync signal detecting unit 720 of Gu to take utilize the advantages provided by the switching unit. Thus, it is believed that the combination of Gu and Kim disclose all of the claim limitations, and there exists proper motivation for the combination thereof. Accordingly, the rejection of claims 24, 28, 30, 32 and 34 are maintained, and is restated below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 24, 28, 30, 32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gu U.S. Patent 6,507,578 in view of Kim U.S. Patent Application Publication 2002/0024995.

Regarding claim 24, Gu discloses a VSB sync signal detection circuit in Figure 3 comprising means (723-1) for generating a first control signal (S9) based on a received input data signal, means (723-3) for generating a position signal (S8) containing information regarding positions of a next field sync (Vsync) and segment sync signals (Hsync) (see col. 11, lines 3-7, 52-58), a correlator (721, 722, 723-2) for generating a sign signal (S12) to determine a sign of the field sync signal (col. 11, lines 41-45), and a generator (signal sync generator 724) for

generating a plurality of distinct types of sync signals based on the control signal (S9), position signal (S8) and sign signal.(S12).

Gu does not expressly show that the first control signal is generated based on receipt of a selected one of an input first data signal and input second data signal. Kim discloses a VSB system in Figure 3 having a switching unit 400 for providing one of a first data signal Xa and a second data signal Xb to a sync signal generator circuit 500. It would have been obvious to one of ordinary skill in the art to use a switching unit as disclosed by Kim in the VSB sync signal detection circuit of Gu to provide a filtered signal via a NTSC rejection filter or an unfiltered signal to the sync generator circuit as desired.

Regarding claim 28, Kim discloses the selection of the first or second data signal based on a control signal from controller 800, where the control signal is considered a data selection signal.

Regarding claim 30, Gu discloses a method for generating one or more VSB sync signals comprising generating a first control signal (S9) based on a received input data signal, determining a position signal (S8) containing information regarding positions of a next field sync (Vsync) and segment sync signals (Hsync) (see col. 11, lines 3-7, 52-58), generating a sign signal (S12) to determine a sign of the field sync signal (col. 11, lines 41-45), and generating a plurality of distinct types of sync signals based on the control signal (S9), position signal (S8) and sign signal.(S12) via a generator (signal sync generator 724) as shown in Figure 3.

Gu does not expressly show that the first control signal is generated based on receipt of a selected one of an input first data signal and input second data signal. Kim discloses a VSB system in Figure 3 having a switching unit 400 for providing one of a first data signal Xa and a

second data signal Xb to a sync signal generator circuit 500. It would have been obvious to one of ordinary skill in the art to use a switching unit as disclosed by Kim in the VSB sync signal detection circuit of Gu to provide a filtered signal via a NTSC rejection filter or an unfiltered signal to the sync generator circuit as desired.

Regarding claim 32, Kim discloses the selection of the first or second data signal based on a control signal from controller 800, where the control signal is considered a data selection signal.

Regarding claim 34, Gu in combination with Kim teach a VSB sync detection circuit for generating a VSB sync signal in accordance with the method of claim 30, having an input data selector (Kim – switching unit 400), a first control signal generator (Gu – 723-1), a position signal determining device (Gu – 723-3), a sign signal generator (Gu – 721, 722, 723-2), and a sync signal output device (Gu – 724).

Allowable Subject Matter

5. Claims 1-23 are allowed.
6. Claims 25-27, 29, 31 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

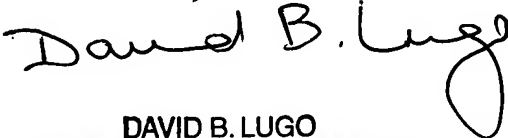
MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David B. Lugo whose telephone number is 571-272-3043. The examiner can normally be reached on M-F; 9:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3066. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

12/13/07


DAVID B. LUGO
PRIMARY PATENT EXAMINER